

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A drive system for an automatic stainer (10), the drive system comprising:
  - a motor (16);
  - a side wall assembly (40) for carrying specimens to be stained; and
  - a first crank system (12) and a second crank system (14) each coupled to the side wall assembly (40) and connected to the motor (16), wherein each of the first and second crank systems (12, 14) includes a rotatably mounted shaft (20) and a pair of levers (19) arranged one at each end of the shaft (20);  
wherein the motor (16) drives both the first and second crank systems (12, 14)  
and the first and second crank systems (12, 14) are each connected to the motor (16) by  
respective power transfer means for providing synchronized operation of the first and  
second crank systems (12, 14).
3. (currently amended) The drive system as defined in Claim 2 Claim 1, wherein the power transfer means includes a toothed belt.
5. (currently amended) The drive system as defined in Claim 4 Claim 1, further comprising a plurality of rollers (17) rotatably mounted one on each of the levers (19).
6. (currently amended) The drive system as defined in Claim 5, wherein the side wall assembly (40) includes a plurality of sloped guide tracks (24) into which the plurality of rollers (17) engage, respectively.
7. (currently amended) The drive system as defined in Claim 6, wherein the plurality of guide tracks (24) are respectively formed as recesses in an associated assembly element (41) mounted on the side wall assembly (40).

8. (currently amended) The drive system as defined in Claim 7, wherein the side wall assembly (40) includes two panels (44) arranged opposite one another and a transverse connector (46) for joining the two panels (44) to one another.
9. (currently amended) ~~The drive system as defined in Claim 1, further~~ An automatic stainer comprising:
  - a base frame (26);
  - a motor (16);
  - a side wall assembly (40) for carrying specimens to be stained;
  - a first crank system (12) and a second crank system (14) mounted on the base frame (26), each of the first and second crank systems (12, 14) being coupled to the side wall assembly (40) and connected to the motor (16);
  - wherein the motor (16) drives both the first and second crank systems (12, 14);
  - and
  - a gate (22) fixed on the automatic stainer (10) with respect to the base frame (26) and coupled to at least one of the first and second crank systems (12, 14).
10. (currently amended) The ~~drive system~~ automatic stainer as defined in Claim 9, wherein the gate (22) comprises a gate guide track (48), and the side wall assembly (40) includes a peg (46) arranged to engage the guide track (48).
11. (currently amended) The drive system as defined in ~~Claim 4~~ Claim 1, further comprising an angle sensor arranged to sense rotation of the shaft (20) of one of the first and second crank systems (12, 14).